

THE TURKISH AND CAUCASIAN COLLECTIONS OF C. KOCH II: CAUCASIA

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ABSTRACT. An account is given of the itineraries of C. Koch in Caucasia and SE Europe in 1836-37 and 1843-44. The regional names and geographical features used by C. Koch in his various accounts of the flora of SW Asia are explained.

This paper deals with the travels of C. Koch in Caucasia and SE Europe; it complements an earlier contribution (Edmondson & Lack, 1977) which dealt primarily with Koch's Turkish collections and gave much of the background of his work in the Orient together with a detailed list of references. Works cited there have not been included in the selected bibliography of this paper.

Koch collected in Caucasia on both of his expeditions: on his *first* expedition in 1836-37 in W Caucasia and on his *second* expedition in 1844 in E Caucasia. Smaller gatherings in SE Europe were made in 1836 on his journey between Moscow and Stavropol, in 1843 on his journey down the River Danube, and in 1844 in the Crimea.

Without doubt, Caucasia was Koch's main collecting area: in all he stayed there for 26 months, compared to about four months in Turkey and two months in SE Europe. However, the number of plants gathered in Caucasia is relatively small in comparison to those collected during Koch's much shorter stay in Turkey. This was due to the fact that Koch was unable to collect during a considerable part of his stay in Caucasia since he spent two winters there, suffered from much ill-health and furthermore in 1844 was prevented from continuing his collecting tours by uprisings of E Caucasian tribes.

Koch, who described more than 500 new species from SW Asia, must be regarded as an important early contributor to the knowledge of the Caucasian flora; Russian esteem for his travels, e.g. 'one of the most important . . . expeditions [in Caucasia],' (Lipsky, 1899) is particularly high and well reflected by the listing of nearly all of Koch's pertinent publications (including *rarissima*) in Russian reference books (e.g. v. Trautvetter, 1880). The importance of Koch's maps for the geobotanical exploration of Caucasia has been recently discussed by Sosnovsky (1963). His work on the oriental flora is commemorated in a number of specific epithets, e.g., *Crepis kochiana* Boiss., *Lactuca kochiana* Beauv., *Ranunculus kochii* Ledeb., *Salvia kochiana* Kze., all described from SW Asia.

I am very grateful to Dr J. R. Edmondson for constant encouragement in this study, for his share in extracting place-names from Koch's accounts in *Linnaea*, for his expert help in tracing obscure Turkish localities and for commenting on the final manuscript. Thanks are also due to Gillian Meadows, Lindy Richardson and H. B. Schaeffer, who drew the maps.

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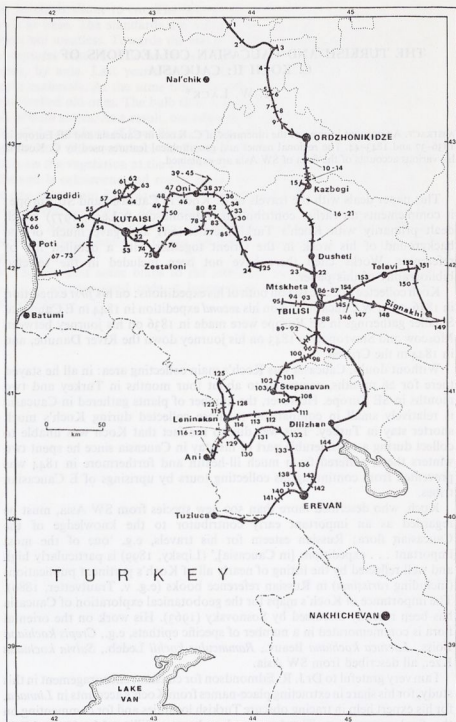


FIG. 1. The Caucasian itineraries of C. Koch's first expedition, 1836-1838 (return journey in winter 1837/38 excluded); the numbers on the map are cited after the localities listed in the gazetteer.

GAZETTEER

Koch collected not only in Anatolia (Edmondson & Lack, 1977) and Caucasia, but over the whole length of his travels which included a trip along the Danube and three journeys in Russia. This is reflected by the description of a few new species from Romania and Bulgaria in the 'Beiträge' (C. Koch, 1848-1851), e.g. *Stachys sideritoides* C. Koch, *Linnaea* 21:692. All localities in Caucasia, Russia and the Balkans visited by Koch on his two expeditions in 1836-1838 and 1843-1844 are therefore included, with the exception of those visited on his return journey from Tiflis via Odessa to St Petersburg in the winter of 1837/38.

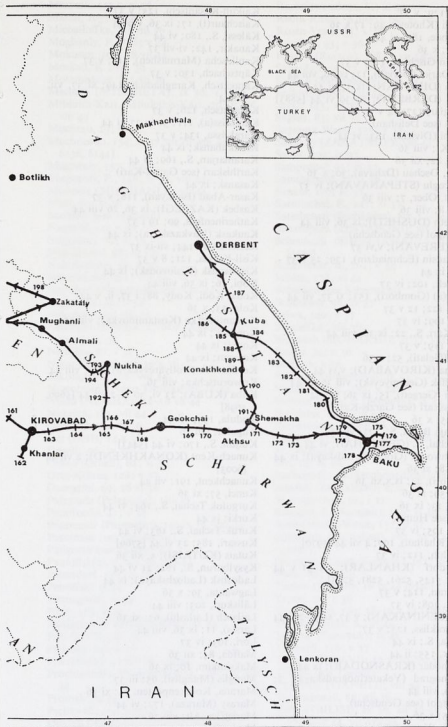
The following alphabetical list was extracted from Koch's travel descriptions (C. Koch 1842-43, 1846b-1847, 1851b, 1854, 1855). Running numbers enable a quick localization on the accompanying maps (figs. 1 & 2); larger towns and important localities named on the map are capitalized in the list and not given numbers. Nearly all localities have been traced from Koch's invaluable 1:1m map (1850). Modern equivalents of Koch's names are given in brackets; throughout the paper these follow the *Times Atlas of the World, Comprehensive Edition* (1968) and the *Gazetteer of the U.S. Board on Geographic Names* (1959, 1970) for their spelling. Dates on which the localities were visited are given and in a few cases collecting numbers from labels of specimens surviving at Hb.B are available and are given in square brackets. Unnumbered localities from Caucasia lie in N Ciscaucasia outside the coverage of fig. 2.

For convenience the list is divided into two parts: a, localities in Caucasia; and b, localities in Russia and the Balkans.

The following abbreviations are used: G. Gross; K. Krepost, Kale(h), Castle; Kl. Klein; M. Mittel; P. Poststation; S. Stanitze, Station.

CAUCASIA

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|--|--|
| Achpad (Akhpat), 107; iv 37 | Archonsk (Arkhonskaya), 207; viii 44 |
| Achsibiut, P., 101; iv 37 | Archwali, 131; v 37 |
| Achtanisoffsk; ix 44 | Ardon, 9; viii 36 |
| Afudsche, 189; vii 44 | Armenibasar, 166; vi 44 |
| Agdscha-Kala (Agdzhakala), 97; 17 iv 37 | Aschtarak (Ashtarak), 138; 19 v 37 |
| Agui, 64; xi 36 | Ateschga, 177; vi 44 |
| Ailanlu, 141; v 37 | Aty; 14 ix 44 |
| Akszu (AKHSU); 4-6 vi 44 [5452, 5472] | Babaratma, S. (Babaratma), 194; vii 44 |
| Alagari, 89; i 37 | Baku (BAKU); 20 vi 44 [5694] |
| Alamalo (ALMALI); vii 44 | Balochani (Baladzhar), 175; vi 44 |
| Alexanderdorf, 87; i 37 | Banduban, 124; v 37 |
| Alexandropol (see Humri) | Baschabaran, 132; v 37 |
| Alexandria, S.; viii 36 | Begkent, 113; v 37 |
| Alexandriisk; ix 44 | Belakan (Belokani), 198; viii 44 |
| Alexandroff(sk) (Aleksandrovskoye); viii 36, ix 44 | Bolins, 92; i 37 |
| Alikotschach, 133; v 37 | Beschanjany, 199; viii 44 |
| Altmyschastoffsk; ix 44 | Borok, 6; viii 36 |
| Amar-Adschan, 176; vi 44 | Boslebi, 76; xii 36 |
| Anaklea (Anaklia), 65; xi 36 | Bschinebi, 79; xii 36 |
| Ananur (Ananuri), 21; ix 36, viii 44 | Chasireh (Kusary), 186; vi 44 |
| Arab, 167; i vi 44 [5407] | Cheita, 28; x 36 |
| Arab, S., 171; vi 44 | Cherti, 29; x 36 |
| Arbat, S., 174; vi 44 | Chimschah, 48; x 36 |
| | Choni (Tsulukidze), 54; x, xi 36 |



on the map are cited after the localities listed in the gazetteer; the regional names are

- Chorun, 129; v 37
 Chothewi (Khotewi), 49; 17 x 36
 Chydirsinde, 181; vi 44
 Chze, 31; x 36
 Daffschan-Gischlau, 117; v 37
 Dariel, Darjel (Dariali), 12; ix 36, viii 44
 Delishan (DILIZHAN); ix 37, ii 44
 Derbend (DERBENT); 29-30 vi 44 [5883]
 Deschesglar, 127; 14 v 37
 Dilschan (see Delishan)
 Diwetschi (Divichi), 183; vi 44
 Donsk, K.; viii 36
 Dschala, 82; xii 36
 Dschawi, Dschau (Dzhava), 30; x 36
 Dschelaroglu (STEPANAVAN); iv 37
 Dschulat, Ober, 7; viii 36
 Durdur, 8; viii 36
 Dus(c)heth (DUSHETI); ix 36, viii 44
 Elisabethpol (see Gendscha)
 Eriwan (EREVAN); v, vi 37
 Etschmiadsin (Echmiadzin), 139; 25 v 37
 Fantan; ix 44
 Gaidarbek, 102; iv 37
 Gambor(a) (Gombori), 153; xi 37, vii 44
 Gapsch, 122; 12 v 37
 Gargar, 109; iv 37
 Garzis-Kari, S., 22; ix 36, viii 44
 Gegath, 119; v 37
 Gelathi (Gelati), 52; x 36
 Gendscha (KIROVABAD); v, vi 44
 Georgieffsk (Georgiyevsk); viii 36, ix 44
 Gergethi (Gergeti), 15; ix 36, viii 44
 Gharthisskari (see Garzis-Kari)
 Glola, 45; x 36
 Glubokaja Balka, S., 173; vi 44
 Gök-Tschai, S. (GEOKCHAI); vi 44
 Gorätschwodsk (Goryachevskaya); ix 44
 Gordi, 58; xi 36
 Gori (Gori), 24; ix, x, xii 36
 Guerdi, 59; xi 36
 Gulethi, 13; ix 36
 Gumri (see Humri)
 Gurtan, 105; iv 37
 Haltan (Khaltan), 190; 4 vii 44 [5970]
 Hamamluh, 112; iv 37
 Helenendorf (KHANLAR); 21-31 v 44
 [5136, 5145, 5261, 5281, 5295]
 Honaggran, 114; v 37
 Hoparzi, 108; iv 37
 Humri (LENINAKAN); v 37, xi 43-2 ii 44
 Ilwa-Karakliss, 123; v 37
 Isrädnaja, S.; ix 44
 Istibulak, 155; ii 44
 Jekaterinodar (KRASNODAR); ix 44
 Jekaterinograd (Yekaterinogradskaya), 3;
 viii 36, viii 44
 Jelisawetpol (see Gendscha)
 Jerzo, 35; x 36
 Jessentuk (Yessentuki); ix 44
 Joanna-Wank, 136; v 37
 Jolamma, S., 187; vi 44
 Kaikuli-Kasantschi, 125; v 37
 Kaischaur(t), 17; ix 36, viii 44
 Kälessi, S., 180; vi 44
 Kanakir, 142; vi-vii 37
 Kanlidscha (Marmashen), 115; v 37
 Käptschach, 130; v 37
 Karagatsch, Karaghadsch, 149; xi 37, vii,
 viii 44
 Karagatsch, 126; v 37
 Karakliss(a), 111; 30 iv 37, ii 44
 Karaklissa, 134; v 37
 Karakubansk; ix 44
 Karamarjan, S., 169; vi 44
 Karthiskari (see Garzis-Kari)
 Kasansk; ix 44
 Kasar-Abad (Isaakyan), 118; v 37
 Kasbek (KAZBEGI); ix 36, 26 viii 44
 Katherinenfeld, 90; 19 i 37
 Kaukask (Kavkazskaya); ix 44
 Ketscharuss, 144; vii-ix 37
 Kisil-Kilissa, 121; 8 v 37
 Kislowodsk (Kislovodsk); ix 44
 Kobi, 16; ix 36, viii 44
 Koda, Kodi, Kody, 88; i 37, ii, v 44
 Kola, 33; x 36
 Kostantinoffka (Kostantinovka); viii 36
 Kopansk; ix 44
 Kopyl; ix 44
 Korssun; ix 44
 Kottläreffsk (Kotlyarevskaya), 209; viii 44
 Kriworutschka; viii 36
 Kuba (KUBA); 23 vi, 30 vi-2 vii 44 [5696,
 5698]
 Kudula, 193; vii 44
 Kugulta; viii 36
 Kuljuli, S., 170; vi 44 [5443]
 Kunach-Kent (KONAKHKEND); 4 vii 44
 [6003]
 Kunachkent, 191; vii 44
 Kunci, 57; xi 36
 Kurguluk Tschai, S., 164; vi 44
 Kurki; ix 44
 Kuruk-Tschai, S., 163; vi 44
 Kussari, 185; 23 vi 44 [5769]
 Kutais (KUTAISSI); x, xii 36
 Kysylburun, S., 182; 21 vi 44
 Ladoshsk (Ladozhskaya); ix 44
 Lagwanta, 39; x 36
 Läliskuri, 203; viii 44
 Lailasch (Lailashi), 63; xi 36
 Lars(s), 11; ix 36, viii 44
 Lori, 103; iv 37
 Maffda, 84; xii 36
 Maksimkim, 10; ix 36
 Manglis (Manglisi), 95; iii 37
 Marana, Kosakenposten, 73; xi 36
 Marasy (Maraza), 172; vi 44
 Marieffka, Alt; viii 36
 Marienfeld, 197; viii 44
 Mariinsk, S.; viii 36, ix 44
 Martkopi (P.), 145; xi 37

- Martwili, 55; x, xi 36
 Matan, 205; viii 44
 Michailoffka, S.; viii 36
 Moghanly, P., 158; v 44
 Mokusan, 196; 18 vii 44
 Moskau, K.; viii 36
 Motamnache, 81; xii 36
 Mscheth (MTSKHETA); ix 36, viii 44
 Mthiulth-Kari, Mtiulethis-Kari, 20; ix 36, viii 44
 Muchrau, 23; ix 36
 Muchrawan, 154; xi 37, 26 vii-viii 44 [6137, 6138, 6144]
 Mughanly, 157; ii 44
 Mughanly, P., 148; xi 37, viii 44
 Muhanly (MUGHANLI); vii 44
 Muri, 61; xi 36
 Mzcheth (see Mscheth)
 Nagiethi, 40; x 36
 Nagomari, 70; xi 36
 Nakalakewi, 98; iv 37
 Nakolachewi, 56; x 36
 Nakolakewi, 201; viii 44
 Napareul (Napareuli), 202; viii 44
 Negausabi, 42; x 36
 Nekressi, 200; viii 44
 Neu-Alexandroffsk (Novo Aleksandrovs-kaya); ix 44
 Neutiflis, 86; i 37
 Nigor-Zminda, 50; 19 x 36
 Nikolajeffsk, 208; viii 44
 Nowotrois (Novo Troitskoye); ix 44
 Nuchi (NUKHA); 12-16 vii 44
 Nukrian, 195; vii 44
 Oguresch, 60; xi 36
 Oni (ONI); 14 x 36
 Opreth, 99; iv 37
 Orbeli (Orbeli), 62; xi 36
 Orta-Kilissa, 128; v 37
 Osurgethi, 69; 26 xi 36
 Palagiada (Pelagiada); viii 36
 Paraffnethi, 41; x 36
 Pasananur (Pasanauri), 19; ix 36, viii 44
 Passanaur (see Pasananur)
 Pätigorsk (see Pjatigorsk)
 Pauloffsk(a), 1; viii 36, viii 44
 Petersdorf, 146; xi 37
 Petroffsk; ix 44
 Phanagoria; ix 44
 Pipis, 156; ii 44
 Pjatigorsk (PYATIGORSK); ix 44
 Poti (POTI); xi 36
 Prijudin, 94; iii 37
 Prischib(sk), 4; viii 36, viii 44
 Prochladnaja (Prokhladnaya), 211; 30 viii 44
 Protozk; ix 44
 Psychaweli, 204; viii 44
 Quareli (Kvareli), 151; xi 37, viii 44
 Quirila, P. (Kvirila), 75; xii 36
 Quischeth (Kvesheti), 18; ix 36, viii 44
 Rasthewenskaja, S.; ix 44
 Redut-Kaleh (Kulevi), 66; xi 36
 Rosen-Veste, 53; x 36
 Rusianti, 43; x 36
 Rustoff (Rustov), 188; 3 vii 44 [5993]
 Saba-Zwinda, 27; x 36
 Sabljah (Sablinskoye); viii 36
 Sachtroni, 206; viii 44
 Sacki, 143; vii 37
 Sagina, 83; xii 36
 Sagmusa-Wank, 135; v 37
 Sakataly (ZAKATALY); viii 44
 Samis, 100; iv 37
 Samprobal, 93; iii 37
 Samtharethi, 36; x 36
 Sanain, 106; iv 37
 Sartütschal, P., 147; xi 37
 Satscheri (Sachkhere), 80; 12-14 xii 36
 Scharopani (ZESTAFONI); xii 36
 Schemachi (SHEMAKHA); 6 vi, vii 44 [5529]
 Schemkürr, S., 161; v 44
 Schich, 178; vi 44
 Schirwan (see Schemachi)
 Schulawer, 96; iv 37
 Seiwa, 140; v 37
 Sergieffka; viii 36
 Signach (SIGNAKHI); xi 37, viii 44
 Socho, 34; x 36
 Sori, 46; x 36
 Ssablja (Sablinskoye); ix 44
 Ssalaoghlu, S., 159; v 44
 Ssenaja Balka, S. (Sennaya); ix 44
 Ssoldatsk, 210; viii 44
 Ssoldatskaia, 2; viii 36, viii 44
 Stauropol (STAVROPOL'); viii 36, 9 ix 44
 St. Nicolaus, 67; 22 xi 36
 Sto, 14; ix 36
 Suchopadinsks (Suchopadinsk); ix 44
 Sugdidi (ZUGDIDI); x, xi 36
 Sugrugaschen, 91; i 37
 Sumgait, S. (Sumgait), 179; vi 44
 Surb-Geurka-Wank, 137; v 37
 Surnabad, (Zurnabad), 162; 24 v 44 [5209, 5222]
 Sutschmi-Dagnä (Suchma), 192; vii 44
 Sweri, 78; xii 36
 Taman (Taman); 16 ix 44 [6340]
 Tapan, 32; x 36
 Taus (Tauz), 160; 18-19 v 44 [5056]
 Temischbergsk, S.; ix 44
 Temruk (Temryuk); ix 44
 Thaharli, 116; v 37
 Thelaff (TELAVI); 17 xi 37, 20 vii 44
 Thelaw (see Thelaff)
 Thianethi (TIANETI); viii 44
 Thormaneuli, 85; xii 36
 Tiflis (TBILISI); ix 36, xii 36-iv 37, ix-xii 37, iii-v 44, vii-viii 44
 Tifliser, S. (Tbilisskaya); ix 44
 Tschalapuri, 74; xii 36

Tschemakly, 165; 31 v, vi, vii 44 [5381]
 Tscherpeli, 120; v 37
 Tschessawali, 37; x 36
 Tschochotauri (Chokhatauri), 71; xi 36
 Tuguluk; viii 36
 Tulakarak, 104; iv 37
 Turjan-Tschai, S., 168; 2 vi 44
 Tursali, 110; iv 37
 Uplos-Veste, 25; ix 36
 Urikalaka, 68; xi 36
 Uruch(sk) (Uruk), 5; viii 36, viii 44
 Ustlabinsk (Ust' Labinskaya); ix 44

Ust-Tskhenistskal, 72; xi 36
 Utsere (Utsera), 44; x 36
 Welis-Ziche (Velistsiche), 150; xi 37
 Welwel, S. (Vel'veli), 184; vi 44
 Wladikaukas (ORDZHONIKIDZE); viii-1
 ix 36, 25 viii 44
 Zedisi (Tsedisil), 38; 9 x 36
 Zesi, 47; x 36
 Zirowani, 51; x 36
 Zrchinwall (Tskhinvali), 26; 3 x, xii 36
 Zrugwethi, 77; xii 36
 Zünobal, 152; xi 37

RUSSIA AND THE BALKANS

For quick localization the territorial abbreviations used in
Flora Europaea (map 1) are given.

Aibar (Voykovo), Rs(K); x 44
 Aidanil (Danilovka), Rs(K); x 44
 Aleschki (Tsurupinsk), Rs(W); x 44
 Alupka (Alupka), Rs(K); ix 44
 Alushta (Alushta), Rs(K); x 44
 Arghin (Balki), Rs(K); ix 44
 Baidar, Rs(K); ix 44
 Baktschisarai (BAKHCHISARAY), Rs(K);
 ix 44
 Balaklawia (Balaklava), Rs(K); ix 44
 Belgrad (BEOGRAD), Ju; vi 43
 Bender (Bendery), Rs(W); x 44
 Bodaisky, S. (Bataysk), Rs(E); viii 36
 Bogoroditz (Bogoroditsk), Rs(C); viii 36
 Bolschoi-Kopan (Bolshoi Kopani), Rs(W);
 x 44
 Böyük-Lambat (Mys Mayachnyy), Rs(K);
 x 44
 Cherson, Rs(K); ix 44
 Cherson (KHERSON); x 44
 Djurmeneh, Rs(K); x 44
 Drenkowa, Rm; vi 43
 Dshuffuth Kaleh, Rs(K); ix 44
 Duwanköi (Verkhne-Sadovoye), Rs(K); ix
 44
 Herkulesbäder (Bäile Herculane), Rm; vi 43
 Ikoretz, M. (Sr. Ikorets), Rs(E); viii 36
 Jalta (YALTA), Rs(K); ix, x 44
 Jeletz (Yelets), Rs(C); 11 viii 36
 Jurssuff (Gurzuf), Rs(K); x 44
 Juschun, Rs(K); x 44
 Kalantschak (Kalanchak), Rs(W); x 44
 Karassubasar (Belogorsk), Rs(K); ix 44
 Kasansk, S., Rs(E); viii 36
 Kertsch (KERCH'), Rs(K); 17 ix 44
 Kirkinneiss, Rs(K); ix 44
 Komorn (Komárno), Hu; vi 43
 Kon-Kalodess, Rs(C); viii 36
 Kostogriwaja, Rs(W); x 44
 Küstendje (Constanța), Rm; vi 43
 Lemberg (L'VOV), Rs(W); x 44
 Livadia (Livadiya), Rs(K); ix, x 44

Maharatsch, Rs(K); ix, x 44
 Mahmud-Sultan, Rs(K); x 44
 Mas(s)andra (Massandra), Rs(K); ix, x 44
 Mehadia, Rm; vi 43
 Mohatsch (Mohács), Hu; vi 43
 Moskau (MOSKVA), Rs(C); 7 viii 36
 Neusatz (Novi Sad), Ju; vi 43
 Neu-Tscherkask (Novocherkassk), Rs(E);
 19 viii 36
 Nikita, Rs(K); ix 44
 Nikolajeff (Nikolayev), Rs(W); x 44
 Nowgorod (NOVGOROD), Rs(C); viii 36
 Nowo-Selitz (Novoselitsy), Rs(W); x 44
 Odessa (ODESSA), Rs(W); x 44
 Oreanda (Oreanda), Rs(K); ix, x 44
 Orschowa (Orșova), Rm; vi 43
 Pankschowa (Pancevo), Ju; vi 43
 Pauloffsk, Rs(E); 16 viii 36
 Perekop, Rs(K); x 44
 Pesth (now part of BUDAPEST), Hu; vi 43
 Petersburg (LENINGRAD), Rs(C); vi-viii
 36
 Petschenjeschka, Rm; vi 43
 Propatschkaja, Rs(K); ix 44
 Rustschuk (Ruse), Bu; vi 43
 Sadonsk (Zadonsk), Rs(C); viii 36
 Schiwinnoje, Rs(C); 13 viii 36
 Schupaneh, Rm; vi 43
 Sebastopol (SEVASTOPOL), Rs(K); ix 44
 Semlin (now part of BEOGRAD), Ju; vi 43
 Sistoff (Svishtov), Bu; vi 43
 Skella-Kladowa, Bu?; vi 43
 Ssarabouss, Rs(K); x 44
 Suchaja, P. (Sukhaya), Rs(E); 18 viii 36
 Sucholoff, S., Rs(E); viii 36
 Sultanoffka, Rs(K); ix 44
 Sympheropol (SIMFEROPOL'), Rs(K);
 ix, x 44
 Tauschan-Basar, Rs(K); x 44
 Theodosia (Feodosiya), Rs(K); ix 44
 Tiraspol (Tiraspol'), Rs(W); x 44
 Torshok (Torzhok), Rs(C); viii 36

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| Trekablem, Rs(K); x 44 | Uroffka, Rs(C); viii 36 |
| Tscherna-Woda (Cernavoda), Rm; vi 43 | Waizen (Vác), Hu; vi 43 |
| Tschernowitz (CHERNOVITSY), Rs(W);
x 44 | Waldai (Valday), Rs(C); viii 36 |
| Tula, Rs(C); 9 viii 36 | Widdin (Vidin), Bu; vi 43 |
| Twer (Kalinin), Rs(C); viii 36 | Woronesh (VORONEZH), Rs(C); 15 viii 36 |
| | Zosna, Rm; vi 43 |

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APPENDIX I

THE PLACE NAMES USED BY KOCH IN LINNAEA

Although Koch gives precise details of collection site and date on his field labels (Edmondson & Lack, 1977), he only rarely used these data in his accounts in *Linnaea*. Instead he often indicated the provenance of a specimen in more general terms—e.g. 'in Mingrelia', 'in tractu Schuragel', 'im Gau Abotz'.

A list of these place names has been prepared from Koch's contributions to *Linnaea*, comprising all names used except those from outside Turkey, Caucasia and SE Europe. Although some of them are mentioned in Koch's introductions to the 'Catalogus' (Koch, 1841:243-246) and 'Beiträge' (Koch, 1848:289-354), many of these terms can be localized only with the help of Koch's own maps. Taken in conjunction with Koch's itinerary (see gazetteer and maps), a more accurate picture can be gained of the likely provenance of the great majority of Koch's new taxa. This list contains a small number of localities visited not by Koch but by other collectors (see Edmondson & Lack, 1977, p. 328).

The list is divided into two parts: (a) an index of all regional names, except those based directly on localities listed in the present gazetteer or in the gazetteer of Turkish localities published earlier (Edmondson & Lack, 1977); and (b) an index to other geographical features (e.g. rivers, mountains, etc.).

Besides the standard *Flora Europaea* abbreviations, the following contractions are used: Ar. Armeniya, Armenian SSR; Az. Azerbaidzhan, Azerbaijan SSR; Ci. Ciscaucasia, asiatic area N of main Caucasus range belonging to the RFSFR (border with Europe defined as on map III of *Flora Europaea*); Gz. Gruzija, Georgian SSR; Ir. Iran; Tu. Turkey (+ grid square and province, as cited in *Flora of Turkey*). Regional names shown on fig. 2 are capitalized. Doubtful names are denoted by a question mark.

REGIONAL NAMES

- Abotz—region N of Leninakan [Ar].
 Airum—district SW of Kirovabad [Az].
 Albanien, Albania—vaguely delimited region within Koch's Daghestan and Schirwan [Az/Ci].
 Armenien, Armenia, russisch Armenien—roughly Ar, including right bank of Aras river near Erevan; note difference from Hocharmenien.
 Armenien, grusisch—see SOMCHIEN.
 Apscheron—Apzheronskiy Poluostrov (peninsula) [Az].
 Aserbaid(s)han, Aserbeidshan—roughly Az east of the line Kakhi-Dashkesan.
 Baku—identical to Apscheron.
 Bambak(i)—region around Stepanavan [Ar].
 Banat(us)—region in Rm/Hu/Ju, see itinerary vi 43.
 Bortschali, Bortschalo—region SW of Tbilisi, now Borchalinskiy (Marneulski) rayon, roughly Masheva and Lower Debet valleys [Gz].
 Bulgarei, Bulgaria—Bu, see itinerary vi 43.
 Cabarda(h)—see KABARDA(H).
 Cachetia—see KACHIEN.
 Caraia—region on the left bank of the Kura river downstream of Tbilisi [Gz].
 Cartalinia—see KARTALIEN.
 Cercetica—see TSCHERKESSIEN.
 Cherkassia—see TSCHERKESSIEN.
 Chewi—region between Darjel and Kobi [Ci/Gz].
 Ciscaucasia, Ciskaukasien—region N of the Caucasus.
 Colchis—see Pontus.
 Daikh—see Land der Taocher.
 DAGHESTAN, Daghestania.
 Daratschitscha(g)k—terrasse N of Erevan [Ar], also used as mountain.
 Dobruega, Dobrutsche—region between Danube river and the Black Sea in Rm, see itinerary vi 43.
 Ds(c)haukom, Dschawi—small region around Dzhava [Gz].
 Erevan, EREWAN, Eriwanscher Kreis, Eriwan'sche Ebene [Ar, Tu].
 Erzo—small region SE of Ducheti [Gz].
 Gends(c)ha—region on the right bank of the Kura river, between Lambalu and Kirovabad [Gz, Az].
 Georgia—see Grusien.
 Ghilan—region on N side of Alborz mts around Rasht [Ir].
 Grusien—Gz east of the line Oni-Akhalkalaki and western part of Az.

- Grusien, ta(r)tarisches—see Gendsha.
 GURIEN, Guria.
 Hemschin—region on N side of Tatus Dağlari (incl. Kaçkar Dağ) between İkizdere and Çamlıhemşin [Tu A8 Rize].
 Hocharmenien—vaguely delimited area in E Turkey.
 Hochland, armenisches—see Hocharmenien.
 Imereth, Imeret(h)ia—see IMERIEN.
 IMERIEN.
 Imreth—see IMERIEN.
 KABARDA(h).
 Kacheth, Kachetien—see KACHIEN.
 KACHIEN, Cachetia.
 Kara(g)bagh—region between Yekaterinogradskaya and Durdur [Ci].
 KARS.
 KARTALI(ni)EN.
 Karthli—see KARTALIEN.
 Ketscheltus—small region N of Dshavi [Gz].
 Kjöla—?.
 Krim, Crimea—Crimea [Rs(K)].
 Kuba, region surrounding Kuba extending NE to the Caspian Sea [Az].
 Kudaro—small region E of Oni [Gz].
 Kurdistan(ia)—vaguely delimited region, generally E & SE Turkey and adjacent territory in N Iraq and W Iran.
 Land der Don'schen Kossaken—probably an area in the Lower Don river valley.
 Land der Taoscher—region around Tavusker W of Olur [Tu A8 Erzurum].
 Lasistan—coastal region between Rize and Batumi [Tu/Gz].
 Liwaneh—E side of Kaçkar Dağ, W of Artvin [Tu A8 Çoruh].
 MINGRELIEN, Mingrelia.
 Musch, Paschalik—area between Muş and Malazgirt [Tu B8/9 Muş].
 Naghds(c)hewan—see NAKHICHEVAN.
 NAKHICHEVAN.
 Nucha—see SCHEKI.
 Ossetia—see OSSIEN.
 OSSIEN, Osseth, Ossia.
 Pennek—region around Penek [Tu A9 Erzurum].
 Pontus—vaguely delimited region, generally the coastal area of NE Turkey and Gz; 'pontische Hochgebirge' seems to refer to the Doğu Karadeniz Dağlari [Tu A7 Trabzon to A8 Çoruh].
 Radscha—region between Ambrolauri and Oni [Gz].
 Samssche—?.
 Sber—region around Ispir [Tu A8 Erzurum].
 SCHAMSHADIL.
 SCHEKI, Scheky.
 SCHIRWAN, Shirvan, schirwan'sche Ebene.
 Serbien—Serbia [Ju], see itinerary vi 43.
 Somchetien, Somchetia—see SOMCHIEN.
 SOMCHIEN.
 Spir—see Sber.
 Ssomcheth, Ssamcheth—see SOMCHIEN.

Surmaly'scher Kreis—region on the right bank of the Aras River, between Tuzluca and the Iranian border [Tu A/B9/10 Kars].

Süd-Russland—S Russia, see itinerary viii 36.

Taikh—see Land der Taocher.

TALYS(c)H.

Taman—Taman peninsula [Ci].

Thioneth—region around Tianeti [Gz].

Tractus Kescheltorum—see Ketscheltus.

Transcaucasia, Transkaukasien—region between the Caucasus and the Turkish and Iranian borders.

Trebisond, Paschalik—coastal area between Tirebolu and Koboleti [Tu/Gz].

Trialeth—Trialetskij Khr. ? [Gz].

Tschainen—coastal area between Samsun and Giresun [Tu A6/7].

T(s)CHERKESSIEN.

Tschernomorien—region on the right bank of the Lower Kuban river [Ci].
ungarische Ebene, grosse—Hungarian plain, Hu/Ju, see itinerary vi 1843.

GEOGRAPHICAL FEATURES

Aksu—river near Akhsu [Az].

Akstafa—river draining into Kura river near Akstafa [Ar/Az].

Aktepe—mt. near Kirovabad [Az].

Alagäs, Allagös—Aragats mt. [Ar].

Alasan—Alazan river [Gz/Az].

Ararat—Büyük Ağri Da. (mt.) [Tu Bro Ağri/Kars].

Araxes—Aras, Araks river [Tu/Ar/Ir/Az] cis Araxin (left side of Aras river);
trans Araxin, jenseits des Araxes (right side of Aras river).

Arpatschai—Arpa river [Tu/Ar].

Asferos—Kara De., river flowing into Black Sea E of Rize [Tu A8 Rize].

Bäder, kaukasische—Caucasian spas, area around Pyatigorsk [Ci].

Balaestom, Balaeston—Oz. Palaeostomi (lake) [Gz].

Balochtschai—see Balüktschai.

Balüktschai—river near Stepanavan [Ar].

Belgrader Wald—Belgrad Ormani [Tu A2(E) Istanbul].

Berg der tausend Seen—see Bingöldagh.

Beshtau—mt. NW of Pyatigorsk [Ci].

Besobdal—mts NE of Leninakan [Ar].

Bingöldagh—Bingöl Dağları (mts) [Tu B8].

Bosp(h)or—Bosphorus [Tu A2 Istanbul].

Brussa—Bursa [Tu A2(A) Bursa].

Cyrus—see Kur.

Daratschitscha(g)k—Tsakhkadzor [Ar], sometimes used as mountain, more often used as region [terrasse N of Erevan].

Denya, Dengä—valley in Daghestan ?

Domoglett—mt. near Mehadia [Rm].

Don, unterer—lower Don river [Rs(E)].

Donauengen—narrows of the Danube river [Ju/Rm].

Dschoroch—see T(s)choruk.

Ebendaselbst—'ditto', i.e. same locality as cited for previous taxon.

- Eupratquellen—source of Firat Nehir (Euphrates), a stream now called Dumlu Su rising above Giregöseke [Tu A8 Erzurum].
- Fortuna, Furtuna—river draining into Black Sea near Ardeşen [Tu A8 Rize].
- Gensha—river flowing through Kirovabad, draining into Kura river [Az].
- Ilwa—mts N of Leninakan, also used as river [Ar].
- Jora—river in Gz, draining into Alazan river.
- Kanly-Dagh—mt. NE of Penek [Tu A9 Erzurum].
- Käpesdagh—mt. in Karabagh? [Ci].
- Karaghadsh—deep valley N of Leninakan [Ar].
- Kasbek—Kazbek (mt.) [Gz].
- Kasach—see Kharssakh.
- Kaukasus, unterer—Maly Kavkas [Gz/Ar/Az].
- Kefar—river in Ciscaucasia 'im Gaue der Abasechen' [?].
- Kermysy Tusla—salt workings near Hinis [Tu A8 Bingöl].
- Khars(s)akh, Kharsagh—river W of Echmiadsin [Ar].
- Ksia—Khrami river [Gz/Az].
- Kuban—major river draining W side of N Caucasus [Ci].
- Kur—Kura (Cyrus), major river rising in Tu A9 Kars flowing into the Caspian Sea [Az, Gz].
- Kureh—see Kürreh.
- Kurjuktschai—river E Kirovabad, draining into Kura river [Az].
- Kürreh—river (delta) in S Daghestan.
- Lelwar—mts NE of Stepanavan [Ar].
- Letschkum, Letschcum—Lechkhumsy Khrebet (mts), used also as valley [Gz].
- Malka—river in Ciscaucasia flowing into Terek river [Ci].
- me(s)schisches (Quer)gebirge—mts between Rioni and Kura rivers [Gz].
- Militärstrasse, grosse—main road between Ordzhonikidze and Tbilisi [Ci/Gz].
- Murad—Murat river, major river rising in Tu B9 Ağrı.
- Nakerala, Nakerale—mts NE of Kutaisi [Gz].
- Olti-Ssu—Oltu river [Tu A8/9 Erzurum].
- Olymp, bithynischer Olymp—Ulu Da. near Bursa [Tu A2(A) Bursa].
- Palästion, Paliastom—see Balaestom.
- Pferdefluss—see Zcheniss-Zkahl.
- Phasis—see Rion.
- pontisches Gebirge—Doğu Karadeniz dağları, coastal mountain range in NE Anatolia [Tu A7 Trabzon to A8 Çoruh].
- Rion—Rioni river [Gz].
- rothes Salzwirk (see Kermysy Tusla).
- Sarjal—see Ssarial.
- Schachjol-Dagh—Köse Dağ, mt. N of Eleşkirt [Tu A/B9 Kars/Ağrı].
- Schurag(h)el—plain of Arpa river [Ar/Tu].
- Selentschuk—Bolshoy Zelenchuk river [Ci].
- Ssamur—Samur river [Ci].
- Ssarial—mt. S of Surnabad [Az].
- Tanais—?
- Temirchanschura—locality in N Daghestan.
- Temirdagh—mt. SE of Cimil [Tu A8 Rize].
- Terek—major river draining E side of N Caucasus [Ci].

Tschackent—locality in Schirwan? [Az].
 Tschornathal—valley of Cerna river [Rm].
 T(s)choruk—Çoruh river [Tu A8 Çoruh].
 Tuslatschai—Hinis river, draining into Murat river [Tu B8/9 Erzurum].
 Zcheniss-Zkhal—Tskhenis river [Gz].
 Zkheniss-Skhal—see Zcheniss-Zkhal.

APPENDIX 2

The following list forms a supplement to the appendix published in part I (Edmondson & Lack, 1977). It contains (a) all taxa based on cultivated material originally collected by Koch in SW Asia and (b) all taxa published by Koch in his accounts in *Linnaea* which were not included in the first appendix. The taxa are listed in alphabetical order by family, genus and species. The names are given as published; orthographic errors are not corrected. No attempt was made to exclude illegitimate names; following the name of the taxon, the relevant volume and page reference in *Linnaea* or other publication is given.

BORAGINACEAE

Nonnea picta Bieb.
 var. *microcarpa* 22:631

CAMPANULACEAE

Campanula glomerata L.
 var. *capituliformis* 23:639
Phyteuma campanuloides Bieb.
 var. *amplexifolius* 23:629

COMPOSITAE

Achillea odorata L.
 var. *thirkei* [Sch. Bip.] 19:314
Bidens tripartita L.
 var. *integra* 17:44
Carduus albus Bieb.
 var. *nanus* 24:391
C. collinus W. & K.
 var. *caucasicus* 24:394
C. multijugus C. Koch
 var. *glabriusculus* 24:392
 var. *lanatus* 24:393
Cirsium obvallatum Bieb.
 var. *glaberrimum* 24:409
Crepis rodigioides [Sch. Bip.] 19:314
Helichrysum arenarium L.
 var. *plinthocalyx* 24:352
H. armenium [Szovits] 24:350
Kentrophyllum lanatum (L.) Tausch
 var. *tenuifolium* 24:389
Podospermum canum DC.
 var. *glabriusculum* 24:659
Psephellus dealbata DC.
 var. *lyrophylla* 24:438
Senecio nemorensis L.
 var. *fuchsii* 17:48
Taraxacum serotinum Poir.
 var. *ericaulon* 17:276
Telekia speciosa Baumg.
 var. *caucasica* 23:712

CONVOLVULACEAE

Convolvulus cantabrica L.
 var. *dorycnioides* 22:743

CORYLACEAE

Corylus pontica C. Koch
 var. *glandulifera* 22:330

CRUCIFERAE

Capsella bursa-pastoris (L.) Medik.
 var. *minima* 19:52
Draba chrysantha 19:316
Sisymbrium elatum, Ind. Sem. Hort. Berol.,
 App. 14 (1854)

CYPERACEAE

Fimbristylis dichotoma Vahl
 var. *tenuis* 21:621
Scirpus lacustris L.
 var. *laxiflora* 21:618
S. maritimus L.
 var. *asper* 21:618

DIPSACACEAE

Scabiosa bipinnata C. Koch
 var. *isantha* 19:34

EUPHORBIACEAE

Euphorbia amygdaloides L.
 var. *oblongifolia* 19:17
E. lucida W. & K.
 var. *oblonga* 21:728
E. macroceras F. & M.
 var. *spectabilis* 21:726

FAGACEAE

Quercus pedunculiflora C. Koch
 var. *virescens* 22:325

GRAMINEAE

- Agropyrum repens* Beauv.
var. *dasyanthum* 21:423
Aira caryophylla L.
var. *expensa* 21:390
Bromus confertus Bieb.
var. *nanus* 21:418
Koeleria phleoides Pers.
var. *viridis* 21:396
Lolium perenne L.
var. *tenue* 19:6

GUTTIFERAE

- Hypericum decussatum* Kze. 24:192

JUNCACEAE

- Juncus compressus* Jacq.
var. *dianthelus* 21:629
J. effusus L.
var. *dasyanthelus* 21:626
var. *macranthelus* 21:626

LABIATAE

- Galeopsis ladanum* L.
var. *simplex* 17:298
Lycopus europaeus L.
var. *stolonifer* 21:647
Salvia kochiana Kze. 24:179
S. verbascifolia Bieb.
var. *lancifolia* 21:655
Stachys germanica L.
var. *alpigena* 21:687
var. *banatica* 21:687
var. *taurica* 21:687
Thymus serpyllum L.
var. *angustifolius* 21:664

LEGUMINOSAE

- Astragalus halicacabus* Lam.
var. *canescens* 15:720
Medicago gerardi W. & K.
var. *armena* 15:717
Vicia sativa L.
var. *uniflora* 15:722
V. sepium L.
var. *caucasica* 15:722

LILIACEAE

- Allium multiflorum* DC.
var. *violaceo-purpureum* 22:239
Gagea lutea L.
var. *angustifolia* 22:226
G. reticulata Pall.
var. *uniflora* 22:227
Ornithogalum fimbriatum Willd.
var. *leioscapum* 22:246
Scilla xanthandra 19:316

ORCHIDACEAE

- Anacamptis pyramidalis* Rich.
var. *oblonga* 22:285
Orchis leptophylla C. Koch
var. *laxa* 22:282
var. *longifolia* 22:283
O. mascula L.
var. *graciliflora* 19:13
O. militaris L.
var. *grandiflora* 22:277

OROBANCHACEAE

- Orobanche arachnoidea* [Fr. Schultz]
22:669
O. epithymum DC.
var. *sordida* 22:664

PAPAVERACEAE

- Papaver lateritum*, Ind. Sem. Hort. Berol.,
App. 14 (1854)

POLYGONACEAE

- Polygonum bistorta* L.
var. *capitatum* 22:196
P. maritimum L.
var. *brevicaule* 22:203
var. *longicaule* 22:202
P. minus Huds.
var. *divaricatum* 22:198

PRIMULACEAE

- Cyclamen europaeum* L.
var. *caucasicum* 23:619

ROSACEAE

- Alchimilla vulgaris* L.
var. *grandis* 16:350
Crataegus pontica, Verh. Vereines Beförd.
Gartenbaues Königl. Preuss. Staaten
N.S. 1: 269
Mespilus germanica L.
var. *microcarpa* 16:351
Prunus monticola, Ind. Sem. Hort. Berol.,
App. 15 (1854)
Spiraea aruncus L.
var. *macrocarpa*, Ind. Sem. Hort. Berol.,
App. 15 (1854)

RUBIACEAE

- Galium mollugo* L.
var. *pseudo-verum* 24:465
G. verum L.
var. *trachyphyllum* 17:33

SCROPHULARIACEAE

- Antirrhinum orontium* L.
var. *longifolium* 19:22
Pedicularis campylosipho C. Koch
var. *glabra* 22:682
P. condens Bieb.
var. *chrysostachys* 22:681

P. sibthorpii Boiss.

var. *somchetica* 22:681

Rhinanthus elephas L.

var. *grandifolius* 22:684

var. *parvifolius* 22:684

Scrophularia scorodonia L.

var. *longipetiolata* 22:709

Verbascum phlomoides L.

var. *bipedale* 22:719

V. saccatum C. Koch

var. *ovatobracteum* 22:723

V. spectabile Bieb.

var. *foliosum* 22:730

Veronica chamaedrys L.

var. *corymbosa* 22:689

V. gentianoides Vahl

var. *undulata* 17:286

V. maxima Stev.

var. *stricta* 22:692

SOLANACEAE

Hyoscyamus eminus Kze. 24:176

THYMELAEACEAE

Daphne caucasica Pall.

var. *cognata* 22:611

UMBELLIFERAE

Pastinaca pimpinellifolia Bieb.

var. *alpina* 16:359